

5'	NCG	CCG	GCG	GCC	TCT	GGT	CTA	CTC	TTT	CCT	TCA	GCC	GCG	GCT	CCT	TTT	CCT	GCC	GCA	CCT	TGT	CAA	GCT	TGT	CTC	CCC	
	9	18	72	27	81	90	36	45	99	90	99	45	54														
GTC	GGC	GCG	GCC	TCT	GGT	GCA	GCG	GCG	GCT	CCT	GCA	CCT	TGT	CAA	GCT	GCT	CTC										
	63	117	126	135	144	144	153	162																			
TCC	CTT	TCT	TAC	CTC	CCC	ACC	AGA	TCC	CGG	AGA	TCG	CCC	GCC	ATG	GCT	TGT	TTA	CTT	M	A	L	L					
	171	180	189	198	207	207	216																				
ACT	GCG	GCC	GCC	CGG	CTC	TTG	GGA	ACC	AAG	AAT	GCA	TCT	TGT	CTT	GTT	CTT	GCA										
T	A	A	R	L	L	G	T	K	N	A	S	C	L	V	L	A	D	L									
	225	234	243	252	261	261	270																				
GCC	CGG	CAT	GCC	AGT	GCT	TCC	TCC	ACG	AAT	TTG	AAA	GAC	ATA	TTG	GCT	GAC	CTG										
A	R	H	A	S	A	S	T	N	L	K	D	I	L	A	D	L											
	279	288	297	306	315	315	324																				
ATA	CCT	AAG	GAG	CAG	GCC	AGA	ATT	AAG	ACT	TTC	AGG	CAG	CAA	CAT	GGC	AAG	ACG										
I	P	K	E	Q	A	R	I	K	T	F	R	Q	Q	H	G	K	T										
	333	342	351	360	369	369	378																				
GTG	GTG	GGC	CAA	ATC	ACT	GTG	GAC	ATG	ATG	TAT	GGT	GGC	ATG	AGA	AGA	GGC	ATG	AAG									
V	V	G	Q	I	T	V	D	M	M	Y	G	G	M	R	G	M	K										

FIGURE 1A

G	L	V	Y	E	T	S	V	L	D	P	D	E	G	I	R	F	R
387		396		405		414		423		432							
GGA	TTG	GTC	TAT	GAA	ACA	TCA	GTT	CTT	GAT	CCT	GAT	GAG	GGC	ATC	CGT	TTC	CGA
G	F	S	I	P	E	C	Q	K	L	L	P	K	A	K	G	G	E
441		450		459		468		477		486							
GGC	TTT	AGT	ATC	CCT	GAA	TGC	CAG	AAA	CTG	CTA	CCC	AAG	GCT	AAG	GGT	GGG	GAA
G	P	L	P	E	G	L	F	W	L	L	V	T	G	H	I	P	T
495		504		513		522		531		540							
GAA	CCC	CTG	CCT	GAG	GGC	TTA	TTT	TGG	CTG	CTG	GTA	ACT	GGA	CAT	ATC	CCA	ACA
E	P	L	P	E	G	L	F	W	L	L	V	T	G	H	I	P	T
549		558		567		576		585		594							
GAG	GAA	CAG	GTA	TCT	TGG	CTC	TCA	AAA	GAG	TGG	GCA	AAG	AGG	GCA	GCT	CTG	CCT
E	E	Q	V	S	W	L	S	K	E	W	A	K	R	A	A	L	P
603		612		621		630		639		648							
TCC	CAT	GTG	GTC	ACC	ATG	CTG	GAC	AAC	TTT	CCC	ACC	ATAT	CTA	CAC	CCC	ATG	TCT
S	H	V	V	T	M	L	D	N	F	P	T	N	L	H	P	M	S
657		666		675		684		693		702							
CAG	CTC	AGT	GCA	GCT	GTT	ACA	GCC	CTC	AAC	AGT	GAA	AGT	AAC	TTT	GCC	CGA	GCA
Q	L	S	A	A	V	T	A	L	N	S	E	S	N	F	A	R	A
711		720		729		738		747		756							
TAT	GCA	CAG	GGT	ATC	AGC	CGA	ACC	AAG	TAC	TGG	GAG	TTG	ATT	TAT	GAA	GAC	TCT
Y	A	Q	G	I	S	R	T	K	Y	W	E	L	I	Y	E	D	S

FIGURE 1B

FIGURE 1C

CGA	GAC	TAC	ATC	TGG	AAC	ACA	CTC	AAC	TCA	GGA	CGG	GTT	GTT	CCA	GGC	TAT	GGC	1188
R	D	Y	I	W	N	T	L	N	S	G	R	V	V	P	G	Y	G	
1143		1152			1161							1170		1179				
CAT	GCA	GTA	CTA	AGG	AAG	ACT	GAT	CCG	CGA	TAT	ACC	TGT	CAG	CGA	GAG	TTT	GCT	1242
H	A	V	L	R	K	T	D	P	R	Y	T	C	Q	R	E	F	A	
1197		1206			1215							1224		1233				
CTG	AAA	CAC	CTG	CCT	AAT	GAC	CCC	ATG	TTT	AAG	TTG	GTT	GCT	CAG	CTG	TAC	AAG	1296
L	K	H	L	P	N	D	P	M	F	K	L	V	A	Q	L	Y	K	
1251		1260			1269							1278		1287				
ATT	GTG	CCC	AAT	GTC	CTC	TTA	GAG	CAG	GGT	AAA	GCC	AAG	AAT	CCT	TGG	CCC	AAT	1350
I	V	P	N	V	L	L	E	Q	G	K	A	K	N	P	W	P	N	
1305		1314			1323							1332		1341				
GTA	GAT	GCT	CAC	AGT	GGG	GTG	CTG	CTC	CAG	TAT	TAT	GGC	ATG	ACG	GAG	ATG	AAT	1404
V	D	A	H	S	G	V	L	L	Q	Y	Y	G	M	T	E	M	N	
1359		1368			1377							1386		1395				
TAC	TAC	ACG	GTC	CTG	TTT	GGG	GTG	TCA	CGA	GCA	TTG	GGT	GTA	CTG	GCA	CAG	CTC	1458
Y	Y	T	V	L	F	G	V	S	R	A	L	G	V	L	A	Q	L	
1413		1422			1431							1440		1449				
ATC	TGG	AGC	CGA	GCC	TTA	GGC	TTC	CCT	CTA	GAA	AGG	CCC	AAG	TCC	ATG	AGC	ACA	1512
I	W	S	R	A	L	G	F	P	L	E	R	P	K	S	M	S	T	
1467		1476			1485							1494		1503				

FIGURE 1D

E	G	1521	1530	1539	1548	1557	1566
		GAG	GGT	CTG	ATG	AAG	TTT
		L	M	K	F	V	D
		1575	1584	1593	1602	1611	1620
		GAA	AGT	GAC	TAC	CAG	AAA
		1629	1638	1647	1656	1665	1674
		AGG	GGG	CCT	TTA	AAG	ACT
		1683	1692	1701	1710	1719	1728
		TTG	AGG	TTA	AAA	TAT	AAA
		1737	1746	1755	1764	1773	1782
		CCT	AAT	CAG	CTC	CCT	GCC
		1791	1800	1809	1818	1827	1836
		CTG	GAG	GAT	GAC	CAG	GAC
		1845	1854	1863	1872	1881	1890
		TAT	CTC	TAG	AGT	GAG	AAT

FIGURE 1E

AGA	ATC	TGT	AGT	CAC	TTT	GGA	GCT	TTA	GCT	TCT	CTG	CCA	AGC	CCT	CAA	TAA	GCC	
1899		1908			1917			1926			1935			1944				
AGC	AAA	CCA	GGA	CTC	TGC	CCC	TTC	TTC	TGT	TTC	CAT	AGG	AAT	CAT	GTT	GGA	TAG	TCA
1953		1962			1971			1980			1989			1998			1998	
GCT	GTA	CCA	AGC	CCC	TTG	GCC	CTC	TCC	CAT	GCA	CAC	AAA	CAC	CTC	CTA	GCA	AGA	
2007		2016			2025			2034			2043			2052				
CCT	GTT	GGT	TAG	CTG	GAC	ATG	CTT	TGG	CAA	TTT	TTT	TAT	ACT	ACC	AAG	TGA	CCA	
2061		2070			2079			2088			2097			2106				

FIGURE 1F

1	M A L L T A A A R L L G T K N A S C L V	2171653
1	M A L L T A A A R L F G A K N A S C L V	GI 164419
21	L A A R H A S A S S T N L K D I L A D L	2171653
21	L A A R H A S A S S T N L K D I L A D L	GI 164419
41	I P K E Q A R I K T F R Q Q H G K T V V	2171653
41	I P K E Q A R I K T F R Q Q H G N T V V	GI 164419
61	G Q I T V D M M Y G G M R G M K G L V Y	2171653
61	G Q I T V D M M Y G G M R G M K G L V Y	GI 164419
81	E T S V L D P D E G I R F R G F S I P E	2171653
81	E T S V L D P D E G I R F R G Y S I P E	GI 164419
101	C Q K L L P K A K G G E E P L P E G L F	2171653
101	C Q K M L P K A K G G E E P L P E G L F	GI 164419
121	W L L V T G H I P T E E Q V S W L S K E	2171653
121	W L L V T G Q I P T E E Q V S W L S K E	GI 164419
141	W A K R A A L P S H V V T M L D N F P T	2171653
141	W A K R A A L P S H V V T M L D N F P T	GI 164419
161	N L H P M S Q L S A A V T A L N S E S N	2171653
161	N L H P M S Q L S A A I T A L N S E S N	GI 164419
181	F A R A Y A Q G I S R T K Y W E L I Y E	2171653
181	F A R A Y A E G I H R T K Y W E L I Y E	GI 164419
201	D S M D L I A K L P C V A A K I Y R N L	2171653
201	D C M D L I A K L P C V A A K I Y R N L	GI 164419
221	Y R E G S G I G A I D S N L D W S H N F	2171653
221	Y R E G S S I G A I D S K L D W S H N F	GI 164419

FIGURE 2A

241	T N M L G Y T D H Q F T E L T R L Y L T	2171653
241	T N M L G Y T D A Q F T E L M R L Y L T	GI 164419
261	I H S D H E G G N V S A H T S H L V G S	2171653
261	I H S D H E G G N V S A H T S H L V G S	GI 164419
281	A L S D P Y L S F A A A M N G L A G P L	2171653
281	A L S D P Y L S F A A A M N G L A G P L	GI 164419
301	H G L A N Q E V L V W L T Q L Q K E V G	2171653
301	H G L A N Q E V L V W L T Q L Q K E V G	GI 164419
321	K D V S D E K L R D Y I W N T L N S G R	2171653
321	K D V S D E K L R D Y I W N T L N S G R	GI 164419
341	V V P G Y G H A V L R K T D P R Y T C Q	2171653
341	V V P G Y G H A V L R K T D P R Y T C Q	GI 164419
361	R E F A L K H L P N D P M F K L V A Q L	2171653
361	R E F A L K H L P H D P M F K L V A Q L	GI 164419
381	Y K I V P N V L L E Q G K A K N P W P N	2171653
381	Y K I V P N V L L E Q G K A K N P W P N	GI 164419
401	V D A H S G V L L Q Y Y G M T E M N Y Y	2171653
401	V D A H S G V L L Q Y Y G M T E M N Y Y	GI 164419
421	T V L F G V S R A L G V L A Q L I W S R	2171653
421	T V L F G V S R A L G V L A Q L I W S R	GI 164419
441	A L G F P L E R P K S M S T E G L M K F	2171653
441	A L G F P L E R P K S M S T D G L I K L	GI 164419
461	V D S K S G	2171653
461	V D S K	GI 164419

FIGURE 2B